

ABSTRACT OF THE DISCLOSURE

A method of forming a bottle-shaped trench. A trench is formed in a substrate, wherein the trench has a surface with an upper portion and a lower portion beneath the upper portion. A dielectric layer is formed on the trench surface at the lower portion. Using the dielectric layer as a mask, a nitridation procedure is performed to form a nitride film on the trench surface at the upper portion. The dielectric layer is removed. Using the nitride film as a mask, an isotropic etching procedure is performed to form a space in the trench at the lower portion. Thus, a bottle-shaped trench is formed.